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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/553,771 | 06/23/2006 | Joern Borgert | PHDE030125US | 7741 |

38107 7590 10/29/2007
PHILIPS INTELLECTUAL PROPERTY & STANDARDS
595 MINER ROAD
CLEVELAND, OH 44143

EXAMINER

WHITTINGTON, KENNETH

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| ART UNIT | PAPER NUMBER |
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2862

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| MAIL DATE | DELIVERY MODE |
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10/29/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|------------------------------------|--------------------------------|--|
| Office Action Summary | Application No. 10/553,771 | Applicant(s) BORGERT ET AL. | |
| | Examiner Kenneth J. Whittington | Art Unit 2862 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>10/19/05</u> . | 6) <input type="checkbox"/> Other: ____. |

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DETAILED ACTION

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP'S 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8 are rejected under 35 U.S.C. 102(b) as being

anticipated by Weed et al. (US4317078), hereinafter Weed.

Regarding claim 1, Weed discloses a tracking method for tracking a sensor in a capture range in a field generated by a field generator, the method comprising the steps of:

(a) generating a field by means of the field generator for defining the capture range (See FIGS. 1-13, item 12);

(b) identifying a region of interest including the sensor within the capture range (See FIGS. 1-13, sensor item 14, see col. 8, lines 48-68, note x-axis is identified);

(c) narrowing the capture range by narrowing the field by means of the field generator (Note definition of narrow as defined by Applicant at paragraph 0006 of the present application that includes adjustment of a direction of the magnetic field. See col. 8, lines 48-68, generator moved along x-axis with sensor stationary, thus direction of magnetic field

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with respect to sensor is adjusted and thus narrowed as contemplated by Applicant);

(d) iteratively repeating steps (a) to (c) (See col. 8, lines 48-68, note generator 14 is repeatedly moved to positions along the x-axis until sufficient to determine x_0).

Regarding claim 2, Weed discloses the field generator is a magnetic field generator and emits a magnetic field, wherein the magnetic field generator comprises at least one coil, further comprising the step of: adjusting a position of the at least one coil in the field generator for narrowing the capture range such that at least one of a size and shape of the capture range is reduced (See FIGS. 1-13, item 12 and see col. 8, lines 48-68, note position of generator is adjusted. Note also that since Weed discloses the movement of one coil as recited in this claim, it discloses the properties recited and contemplated in view of this movement in this claim).

Regarding claim 3, Weed discloses the step of displacing the field generator for narrowing the capture range (Note again definition of narrow as defined by Applicant at paragraph 0006 of the present application that includes adjustment of a direction of the magnetic field. See col. 8, lines 48-68, generator moved along x-axis with sensor stationary, thus

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direction of magnetic field with respect to sensor is adjusted and thus narrowed as contemplated in this claim).

Regarding claim 4, Weed discloses the field generator is a magnetic field generator and emits a magnetic field, wherein the magnetic field generator comprises at least one coil, further comprising the step of: adjusting an orientation of the at least one coil in the field generator for narrowing the capture range such that a location of the capture range is adjusted (See FIGS. 1-13, item 12 and see col. 8, lines 48-68, note movement of coil 12 changes the orientation of the coil 12 with respect to sensor 14, thus location is adjusted. See also col. 9, lines 1-25, note coil 12 is rotated and moved along y-axis).

Regarding claim 5, Weed discloses a tracking system for tracking a sensor in a capture range in a field generated by a field generator, wherein the field generator is adapted to adjust at least one of a size, direction and orientation of the capture range (See col. 8, line 48 to col. 9, line 25, note coil 12 is moved along the x and y axis and rotate 90 degrees, each and/or all of which adjusts the magnetic field).

Regarding claim 6, Weed discloses the field generator is a magnetic field generator and emits a magnetic field; wherein the magnetic field generator comprises at least one coil; and wherein a position of the at least one coil in the field

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generator is adjustable for narrowing the capture range such that at least one of a size and shape of the capture range is reduced (See FIGS. 1-13, item 12 and see col. 8, lines 48-68, note position of generator is adjusted. Note also that since Weed discloses the movement of one coil as recited in this claim, it discloses the properties recited and contemplated in view of this movement in this claim).

Regarding claim 7, Weed discloses the field generator is movable for narrowing the capture range (Note again definition of narrow as defined by Applicant at paragraph 0006 of the present application that includes adjustment of a direction of the magnetic field. See col. 8, lines 48-68, generator moved along x-axis with sensor stationary, thus direction of magnetic field with respect to sensor is adjusted and thus narrowed as contemplated in this claim).

Regarding claim 8, Weed discloses the field generator is a magnetic field generator and emits a magnetic field; wherein the magnetic field generator comprises at least one coil; and wherein an orientation of the at least one coil in the field generator is adjustable for narrowing the capture range such that a location of the capture range is adjusted (See FIGS. 1-13, item 12 and see col. 8, lines 48-68, note movement of coil 12 changes the orientation of the coil 12 with respect to sensor

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14, thus location is adjusted. See also col. 9, lines 1-25, note coil 12 is rotated and moved along y-axis).

Claims 1, 5 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Acker (US5729129). Regarding claim 1, Acker discloses a tracking method for tracking a sensor in a capture range in a field generated by a field generator, the method comprising the steps of:

(a) generating a field by means of the field generator for defining the capture range (See Acker FIGS. 1-4, items 10, 10a, 10b, 10c);

(b) identifying a region of interest including the sensor within the capture range (See FIG. 1, item 50);

(c) narrowing the capture range by narrowing the field by means of the field generator (See FIG. 4 and col. 7, line 21 to col. 8, line 39, note the field strength of the coils 10, 10a, 10b and 10c is adjusted and hence their size or range is adjusted depending on the position of sensor and its output signal);

(d) iteratively repeating steps (a) to (c). (See FIG. 4, col. 7, line 21 to col. 8, line 39, note process is repeated as the sensor moves within the system).

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Regarding claim 5, Acker discloses a tracking system for tracking a sensor in a capture range in a field generated by a field generator, wherein the field generator is adapted to adjust at least one of a size, direction and orientation of the capture range. (See FIG. 4 and col. 7, line 21 to col. 8, line 39, note the field strength of the coils 10, 10a, 10b and 10c is adjusted and hence their size or range is adjusted depending on the position of sensor and its output signal).

Regarding claim 9, Acker discloses a computer program product comprising computer program code means to perform the following steps when the computer program is executed on a computerized tracking system (See col. 6, lines 19-49):

(a) generating a field by means of the field generator for defining the capture range (See Acker FIGS. 1-4, items 10, 10a, 10b, 10c);

(b) identifying a region of interest including the sensor within the capture range (See FIG. 1, item 50);

(c) narrowing the capture range by narrowing the field by means of the field generator to the region of interest (See FIG. 4 and col. 7, line 21 to col. 8, line 39, note the field strength of the coils 10, 10a, 10b and 10c is adjusted and hence their size or range is adjusted depending on the position of sensor and its output signal);

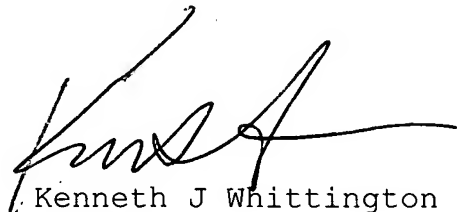
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(d) iteratively repeating steps (a) to (c) (See FIG. 4, col. 7, line 21 to col. 8, line 39, note process is repeated as the sensor moves within the system).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth J. Whittington whose telephone number is (571) 272-2264. The examiner can normally be reached on Monday-Friday, 7:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Assouad can be reached on (571) 272-2210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

A handwritten signature in black ink, appearing to read 'Kenneth J. Whittington', is written over the printed name.

Kenneth J Whittington
Examiner
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kjw